

**Final**

**Site-Specific Work Plan**  
**OE Site Characterization**  
**for**  
**M1.01 Parcel and M3 Miscellaneous Properties**  
**on**  
**Fort McClellan, Alabama**

Task Order 0001  
Contract Number DACA87-99-D-0010



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Engineering and Support Center  
Huntsville, Alabama

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Prepared by:



**TETRA TECH FW, INC.**

Fort McClellan, Alabama

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## LIST OF ACRONYMS

AHA	Activity Hazard Analyses
AR	Army Regulation
BIP	Blown in place
BRAC	Base Realignment and Closure
CD-ROM	Compact Disc – Read Only Memory
CWM	Chemical Warfare Materiel
DGPS	Differential Global Positioning System
DID	Data Item Description
DoD	Department of Defense
DOT	Department of Transportation
EOD	Explosive Ordnance Disposal
FMC	Fort McClellan
GIS	Geographical Information Systems
HTRW	Hazardous, Toxic, and Radioactive Waste
IAW	In Accordance With
JPA	Joint Powers Authority
mm	millimeter
MPM	Most Probable Munition
MSD	Minimum Separation Distance
msl	Mean Sea Level
NCR	Nonconformance Report
OE	Ordnance and Explosives
OEW	Ordnance and Explosive Waste
PESM	Project Environmental and Safety Manager
PE	Professional Engineer
PM	Project Manager
QA	Quality Assurance
QC	Quality Control
RCWM	Recovered Chemical Warfare Material
RLS	Registered Land Surveyor
RR	Range Residue
SOW	Statement of Work
SSHPP	Site-Specific Safety and Health Plan
SWWP	Site Wide Work Plan
SUXOS	Senior UXO Supervisor
TtFWI	Tetra Tech, FWI
USACE	US Army Corps of Engineers
USAESCH	US Army Engineering & Support Center, Huntsville
UXO	Unexploded Ordnance
UXOQCS	UXO Quality Control Specialist
UXOSO	UXO Site Safety and Health Officer

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## **1.0 INTRODUCTION**

### **1.1 GENERAL**

1.1.1 This is a site-specific work plan prepared for the execution of Task Order (TO) 0001 (Task 3) Site Characterization of the M1.01 Parcel and M3 Miscellaneous Properties. This work is being carried out as a component of contract DACA87-99-D-0010, Ordnance and Explosives Response at Fort McClellan, Alabama by Tetra Tech FW, Inc. (TtFWI).

### **1.2 OBJECTIVE**

1.2.1 The objective of this Task Order is to investigate six grids within the M1.01 Parcel and M3 Miscellaneous Properties in order to demonstrate to ADEM that a one foot clearance was an appropriate UXO remedy for this area.

### **1.3 SITE LOCATION**

1.3.1 Fort McClellan is located northeast of the City of Anniston, Calhoun County, Alabama. To the west are the areas known as Weaver and Blue Mountain. To the North is the City of Jacksonville. The Talladega Forest is to the east of the post. The M1.01 Parcel and M3 Miscellaneous Properties is located within the western portion of the former post on property now owned by the local Joint Powers Authority (JPA). Figure B-1 shows the location of the M1.01 Parcel and M3 Miscellaneous Properties.

### **1.4 SITE HISTORY**

1.4.1 Fort McClellan has been used for artillery training of troops and the National Guard as early as 1912 to early WW II. In 1951, Fort McClellan became the site of the Chemical Corps Training Command. In 1962, the U.S. Army Combat Developments Command Chemical Biological-Radiological Agency moved to Fort McClellan. In 1973, the Chemical Corps School along with the U.S. Army Combat Developments Command Chemical Biological-Radiological Agency was moved to Edgewood Arsenal. In 1979, the U.S. Army Chemical Corps School re-established along with a training Brigade for Basic Training. In September of 1999, Fort McClellan was closed under Base Realignment and Closure (BRAC).

### **1.5 TOPOGRAPHY**

1.5.1 The surface topography of Fort McClellan varies greatly over its entire area. Within the M1.01 Parcel and M3 Miscellaneous Properties, the surface topography is less variable. Most of the surface terrain is relatively flat to moderately sloping hills. The overall elevation of the parcel and the associated areas ranges from approximately 750 to 800 feet above mean sea level (msl), with the highest elevation near the eastern end of the area.

**1.6 CLIMATE**

1.6.1 Fort McClellan is situated in a temperate, humid climate. Summers are hot and long, and winters are usually short and mild to moderately cold. The climate is influenced by frontal systems moving from northwest to southeast, and temperatures change rapidly from warm to cool due to the inflow of northern air. The average annual temperature is 63 degrees Fahrenheit (°F). Summer temperatures usually reach 90°F or higher about 70 days per year, but temperatures above 100°F are rare. Freezing temperatures are common but are usually of short duration. The first frost may arrive by late October. At Anniston, the average date of the first 32°F temperature is November 6, and the last is March 30. This provides a growing season of 221 days. Snowfall averages 0.5 to 1 inch. On rare occasions, several inches of snow accumulate from a single storm (ESE, 1997).

1.6.2 The average annual rainfall is approximately 53 inches and is well distributed throughout the year. The more intense rains usually occur during the warmer months, and some flooding occurs nearly every year. Approximately 80 percent of the flood-producing storms are of the frontal type and occur in the winter and spring, lasting from 2 to 4 days each. Summer storms are usually thunderstorms with intense precipitation over small areas, and these sometimes result in serious local floods. Occasionally, several wet years or dry years occur in series. Annual rainfall records indicate no characteristic order or pattern (ESE, 1997).

1.6.3 Winds in the Fort McClellan area are seldom strong and frequently blow down the valley from the northeast. However, there is no truly persistent wind direction. Normally, only light breezes or calm prevail, except during passages of cyclonic disturbances, when destructive local wind storms develop, some into tornadoes, with winds of 100 miles per hour or more (ESE, 1997).



## **2.0 TECHNICAL MANAGEMENT PLAN**

### **2.1 GENERAL**

2.1.1 In accordance with US Army Engineering & Support Center, Huntsville (USAESCH) Data Item Description (DID) OE-005-02.01, Technical Management Plan, the following items have been addressed and are included within Section 2.0 - Technical Management Plan of the SWWP:

1. Identification of guidance, regulations, or other policy under which the OE operations will be conducted (SWWP – paragraph 2.1.1 to paragraph 2.1.5);
2. Discussion, assumptions, and procedures to be followed relating to the discovery of Chemical Warfare Material (CWM) on a conventional ordnance site (SWWP – paragraph 2.1.6);
3. Procedures to be followed in the event unexploded ordnance (UXO) cannot be destroyed onsite, if planned (SWWP – paragraph 2.1.7); and
4. Procedures to follow if an unidentified UXO is located (SWWP – paragraph 2.1.7).

### **2.2 APPROACH**

2.2.1 The following approach is proposed in order to satisfy the intent of the Statement of Work. These procedures are designed for investigating the six grids in order to demonstrate to ADEM that a one foot clearance was an appropriate UXO remedy for this area.

### **2.3 SITE PREPARATION**

2.3.1 A surface clearance will not be performed in this area because it has previously been cleared to one foot.

2.3.2 A Registered Land Surveyor shall set out the grid corners utilizing precision-surveying methods to closer than one foot. The subcontractor RLS will not require a UXO escort based on the previous clearance to one foot activity.

2.3.3 Brush removal will be done without a UXO escort. TtFWI or sub-contractor personnel shall carry out vegetation clearance by mechanical and/or manual means. If required, trees up to 4 inches in diameter will be removed. Lateral branches and other impediments to geophysical surveying and intrusive activities shall be removed to approximately 8 feet above grade to allow unimpeded access to all areas within the six grids.

## **2.4 GEOPHYSICAL SURVEY**

2.4.1 A geophysical prove out will not be performed. The equipment to be used will be the EM-61 one-meter coil, with positional data provided by the Ultrasonic Ranging and Detection System (USRADS), Differential Global Positioning System (DGPS), Constellation, Robotic Total Station, or using other suitable method as appropriate. The equipment will be processed through the existing geophysical test grid to validate that the equipment is working and acquiring data as designed. The information gathered during the equipment test will be documented in the letter report for this investigation and will be presented along with the information pertaining to the existing test grid.

2.4.2 TtFWI shall provide the necessary personnel and equipment (listed above) to carry out the geophysical survey of the investigation area. The data collected during the geophysical surveying process will be utilized to select targets for excavation. A combination of on-site geophysicists and off-site geophysicists will conduct the necessary analysis of the data in order to enable the production of dig-sheets.

## **2.5 INTRUSIVE INVESTIGATION**

2.5.1 TtFWI will provide equipment and personnel to reacquire the targets selected during the geophysical survey. Suspected subsurface anomalies will be presented as co-ordinate locations in the packages provided to the intrusive teams. DGPS, USRADS, Robotic or Conventional Total Station, Vulcan Spatial Measurement System, measuring tapes or other appropriate surveying techniques will be used to locate the X, Y co-ordinates of each anomaly. Each anomaly will be flagged with a numbered pin flag corresponding to the anomaly ID located at that position.

2.5.2 TtFWI will provide the necessary personnel and equipment in order to carry out the intrusive investigation of the M1.01 Parcel and M3 Miscellaneous Properties. The intrusive team shall be equipped with hand tools or mechanical excavation equipment to excavate all target anomalies. The team leader shall directly supervise all team members and shall maintain a detailed log.

2.5.3 In the instance where anomalies are located underneath tree stumps, excavation methods will be utilized to dig down beside the anomaly and then access will be gained from the side. Although not expected, in instances where target sized anomalies are found to be grown within a tree stump, consultation with the on-site USAESCH Safety Specialist will be carried out to ascertain the most appropriate access method.

2.5.4 All recovered OE shall be disposed of weekly in accordance with Technical Manual (TM) 60A-1-1-31, General Information for Explosive Ordnance Disposal (EOD) Procedures unless an exception is approved by the on-site USAESCH Safety Specialist. All explosives for disposal operations will be stored in the approved TtFWI magazine. If any OE item is found that cannot be moved to a secure location will be guarded, all work on this task will stop, and a notice of changed site condition and a request for direction will be sent to the Contracting Officer.

2.5.5 TtFWI shall maintain, as part of its database, a standardized account of all OE/UXO, Inert Ordnance, and OE Scrap items/components encountered on the project site. This information will be provided in the letter report prepared after completion of the investigation.

2.5.6 TtFWI shall furnish all necessary personnel to inspect and turn in all recovered scrap metal/range residue in accordance with Department of Defense (DoD) 4160.21-M, Defense Demilitarization Manual.

2.5.7 In order to maintain a safe working environment a 200 foot separation distance will be maintained between teams and all visitors/observers. In order to enter the 200 foot separation distance a request will need to be made to gain permission to enter the work site.

## **2.6 QUALITY CONTROL (QC) PLAN**

2.6.1 QC will be conducted on processes and products within the Task Order. These processes include both field and office processes to include QC on all data collected as part of this Task Order. The basis of the Quality Control Plan is a three-phase control process consisting of preparatory, initial, and follow-up inspection to ensure processes are in control and opportunities for improving processes are captured and implemented. Product QC will be carried out using a MILSTD 1916 approach to re-sampling. Chapter 11 covers the QC plan in detail.

## **2.7 PERSONNEL**

### **2.7.1 UXO Personnel and Qualifications**

2.7.1.1 All individuals executing UXO procedures or UXO-related procedures will be qualified UXO personnel. These personnel will be US citizens who have graduated from the US Army Bomb Disposal School, Aberdeen, Maryland, or the US Naval Explosive Ordnance Disposal (EOD) School, Indian Head, Maryland or Eglin Air Force Base, Florida or a DoD approved UXO training facility. UXO personnel resumes and appropriate training certificates will be provided to US Army Engineering & Support Center, Huntsville (USAESCH) for approval prior to field tasks commencing.

### **2.7.2 Key Personnel Responsibilities**

2.7.2.1 All field teams shall follow the procedures outlined within this Work Plan. The UXO teams will consist of a qualified UXO Supervisor and UXO Technicians approved by USAESCH. Qualification certificates are maintained on file at the corporate office and will also be maintained on-site in the office trailer. The key personnel in this Task Order are:

2.7.2.2 Program Manager. The site wide Program Manager is Mr. Arthur Holcomb, Professional Engineer (PE). It is the responsibility of the Program Manager to:

- Ensure that full cooperate resources are made available to the program as needed;
- Serve as necessary, as an intermediary between the USAESCH contract officer (CO) and Tetra Tech FW, Inc.'s corporate management; and

- Assist the Task Order Manager in problem resolution and corrective action implementation.

2.7.2.3 Project Manager (PM). The PM is Mr. Todd Biggs. His responsibilities include: coordination with the TtFWI Program Manager in developing project scope and costs, detailed work order specifications and schedules and identification of project personnel to be utilized in accomplishing the Statement of Work. Procurement and management of subcontractors is also the responsibility of the PM. The PM is responsible for the completion of all major deliverables. The PM will also approve charges by field and office personnel, compare ongoing project cost and schedule performance to the baseline cost/schedule, and bring any significant variance to the attention of the TtFWI Program Manager, who will communicate impacts to the USAESCH PM as necessary. The PM will identify if a change in scope is necessary to meet technical requirements, and will discuss potential changes in scope with the TtFWI Program Manager and with the USAESCH PM as necessary.

2.7.2.4 Senior UXO Supervisor (SUXOS). The SUXOS shall report to the TtFWI PM in the function of his responsibilities which are detailed in Section 2.2.1.2 off the SWWP.

2.7.2.5 UXO Quality Control Specialist (UXOQC) shall report to the TtFWI PM and UXO Quality Manager. His responsibilities are detailed in Section 2.2.1.4 off the SWWP.

UXO Site Safety Officer (UXOSO). The UXOSO for this Task Order will be a USAESCH and TtFWI approved UXOSO. His responsibilities are detailed in Section 2.2.1.3 off the SWWP.

### **2.7.3 Composition of Teams**

2.7.3.1 The following is the composition of the teams involved in the Task Order.

2.7.3.2 Geophysical Survey. These teams will be involved in all aspects of the geophysical survey. Each team shall consist of qualified geophysical equipment operators.

2.7.3.3 Intrusive Teams. These teams will intrusively investigate the M1.01 Parcel and M3 Miscellaneous Properties. UXO teams shall have a minimum of two UXO qualified personnel, one of which shall be the UXO Technician III. The other five members can be UXO Tech III, II, I as needed.

2.7.3.4 Quality Control. The Quality Control Team will consist of one USAESCH approved UXO Quality Control Specialist (UXOQCS), and up to three other UXO Technicians to assist in the implementation of the QC plan.

### **2.7.4 Mobilization Plan**

2.7.4.1 TtFWI is already established on the site with field office and storage facilities. Further project specific personnel and equipment will be mobilized as needed.

**3.0 EXPLOSIVES MANAGEMENT PLAN**

**3.1 GENERAL**

3.1.1 An Explosives Management Plan was prepared IAW USAESCH DID OE-005-03, Explosives Management Plan, Federal Acquisition Regulation (FAR) 45.5, ATFP 5400.7, DoD 6055.9-STD, Army Regulation (AR) 190-11, DOT Regulations, and Alabama Explosive Safety Act of 1993. The local Explosive Management Plan has been developed and approved and is located in the Site Wide Work Plan (SWWP).

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**4.0      EXPLOSIVES SITING PLAN**

**4.1      GENERAL**

4.1.1      An Explosives Siting Plan was prepared IAW USAESCH DID OE-005-4, Explosives Siting Plan. See Section 4 - Explosives Siting Plan, in the SWWP.

4.1.2      There is no Most Probable Munition (MPM) for this investigation. The area has received a statement of clearance from the U.S. Army Corps of Engineers, Huntsville. If an OE items discovered in this area all work will cease and direction requested from the Contracting Officer.

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## **5.0 GEOPHYSICAL PROVE-OUT PLAN AND REPORT**

5.0.1 This section is not required for this work plan.

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## **6.0 GEOPHYSICAL INVESTIGATION PLAN**

### **6.1 GENERAL**

6.1.1 The geophysical investigation shall be supervised by a qualified geophysicist.

### **6.2 GEOPHYSICAL INVESTIGATION PROGRAM OBJECTIVES**

6.2.1 A geophysical mapping survey is to be performed over an agreed and budgeted six grids within the M1.01 Parcel and M3 Miscellaneous Properties. The objective of the geophysical investigation is to detect metallic objects and features (anomalies) to the following criteria: "Any item below a depth of one foot that meets the specified target item size of between a 37mm and 3" Stokes Mortar."

6.2.2 The geophysical survey methodology that will be employed is 100% mapping over all six grids. The geophysical mapping will be accomplished using the EM-61 coupled with a suitable positioning system.

### **6.3 AREA OF INVESTIGATION**

6.3.1 The area of investigation is the M1.01 Parcel and M3 Miscellaneous Properties. The terrain ranges from flat to moderately sloped terrain. Geophysical mapping will be completed in all areas where possible. Where the terrain is too severe to allow for mapping to occur, traditional mag and dig protocols will be used.

6.3.2 TtFWI anticipates finding no OE/UXO items within this investigation area.

### **6.4 GEOLOGIC CONDITIONS**

6.4.1 Fort McClellan is situated near the southern terminus of the Appalachian Mountain chain. All but the easternmost portion of the Main Post lie within the Valley and Ridge Province of the Appalachian Highlands. The portion of Fort McClellan west of Choccolocco Creek lies within the Piedmont Province. The age of the consolidated sedimentary and metamorphic rocks range from Precambrian to Pennsylvanian. On a large scale, most of the rocks have been intensely folded into an aggregate of northeast-southwest trending anticlines and synclines with associated thrust faults. The shallow geology in the area is characterized by colluvial deposits. Table 5-1 in the approved SWWP summarizes the major stratigraphic units underlying Fort McClellan. The presence of metamorphic rocks increases the potential for minerals such as magnetite and other associated magnetic minerals; it is important to utilize this information when planning and selecting sensors for geophysical surveys at Fort McClellan.

### **6.5 SOIL CONDITIONS**

6.5.1 This information is reviewed in Section 5.3.9 of the SWWP.

## **6.6 SHALLOW GROUNDWATER CONDITIONS**

6.6.1 This information is discussed in Section 5.3.11 of the SWWP.

## **6.7 SITE UTILITIES**

6.7.1 There are no known existing subsurface utilities in the areas that will be geophysically surveyed based on current information. If utilities are identified during the geophysical data interpretation, they will be documented and annotated on color-coded maps and intrusive dig sheets. The rigorous nature of intrusive excavation for UXO further ensures that any utilities will not be inadvertently damaged.

## **6.8 SITE-SPECIFIC DYNAMIC EVENTS**

6.8.1 This information is discussed in Section 5.3.14 of the SWWP.

## **6.9 OVERALL SITE ACCESSIBILITY AND IMPEDIMENTS**

6.9.1 The M1.01 Parcel and M3 Miscellaneous Properties contains paved, unpaved improved and dirt roads that will be used to access areas to collect data.

## **6.10 POTENTIAL WORKER HAZARDS**

6.10.1 This information is reviewed in the SWWP Chapter 6 – Site Wide Safety and Health Plan.

## **6.11 GEOPHYSICAL INVESTIGATION METHODS**

6.11.1 The EM-61 utilizes two coaxial receiver coils to measure the residual magnetic field generated by conductive and/or magnetic materials (i.e., non-ferrous and ferrous objects and features). The EM-61's proposed by Foster Wheeler Environmental are designed to measure the residual magnetic field at a time when the response from conductive and/or magnetic objects is maximized compared to the response from most earth materials. The use of two receiver coils also makes it possible to differentiate, in a simplistic fashion, shallow versus deeper objects. An additional benefit of the specific design of the EM-61 system is that it permits a more focused observation of the subsurface in areas of cultural interference, as well as areas characterized by a high spatial density of medium to large-size (e.g., 81mm, 155mm) subsurface objects. This is due to both the mechanical design and operational parameters of the instrument, as well as the inherent nature of active EM fields, which diminish in magnitude at a much higher rate than other sensor technologies such as magnetometry.

6.11.2 The primary factors that affect the ability to detect objects or features with time, domain, and electromagnetic (TDEM) methods include volumetric size and orientation, distance from the sensor, the material properties contrast between the object or feature and the surrounding materials, and the magnitude of natural and manmade sources of "noise".

6.11.3 The EM-61 is relatively insensitive to nearby surface cultural interference such as buildings, power lines, and fences, and has the ability to record digital data at up to 18 hertz, which translates to a spatial sample density of approximately 0.15 feet along the ground surface.

6.11.4 Each segment/grid will be cleared of vegetation and other natural materials that may impede the data acquisition process, or significantly alter the resultant quality of data from the geophysical survey. After these activities are completed, the area will be surveyed with the EM-61 coupled to a DGPS, USRADS, Constellation, or Robotic Total Station. Geophysical and position measurements will be digitally recorded and the raw data acquired in the field for each survey grid will be prepared for processing by the Site Geophysicist. This data will be processed, analyzed, and interpreted to prepare dig sheets for intrusive activities.

## **6.12 PERSONNEL**

6.12.1 The Site Geophysicist will work with the geophysical survey team to ensure the production rates are met and the data quality, especially during field data acquisition activities, is adequate to meet the program objectives. The Site Geophysicist is responsible for the field component of the geophysical investigation including planning, data acquisition, ensuring data quality, resolution of instrumentation problems, and assisting with the review of intrusive investigation data. The Site Geophysicist is responsible for data processing and transfer of the raw and corrected data to USAESCH geophysical representative.

6.12.2 The Home Office Geophysicist will be responsible for the overall quality of the geophysical program, and will provide guidance to the Site Geophysicists in the processing and interpretation of the data. The Home Office Geophysicist will perform the QC of the processed data and will perform the processing of QC specific data collected as part of the MIL-STD 1916 product QC.

6.12.3 The geophysical survey team will be responsible for collecting data and providing this data to the Site Database Manager on a daily basis. .

## **6.13 DATA PROCESSING**

6.13.1 The TtFWI Site Geophysicist will perform preliminary geophysical and navigation data processing and QC checks. Processing, QC, and analysis and interpretation of the data are performed with internally developed software that has been specifically produced to integrate and interpret digital geophysical data acquired with the applicable positioning systems. The specific parameters used to process the EM-61 and positional data may vary, however, the processing parameters and results are documented in digital computer files so that the sequence of events can be reconstructed and analyzed at a later date, if necessary. This level of documentation helps to ensure that the overall process is repeatable.

6.13.2 Digital processing/interpretation folders will be maintained for the survey so that the processing/interpretation sequence can be reproduced at a future date, if necessary. The format of the digital geophysical data, as well as the graphics produced, will be compatible with the existing project database protocols (USAESCH ASCII ADF space delimited xyz file format,

with appropriate header information). Foster Wheeler Environmental shall preserve the integrity of the raw, positionally corrected data and ensure that these data are provided to a USAESCH representative.

6.13.3 The geophysical and position data supplied to USAESCH will allow for corrections such as navigation, and instrument bias shift but there will be no filtering or normalization of this data. Each grid of data shall be logically and sequentially named so that the file name can be easily correlated with the grid name used by other project personnel.

6.13.4 It is anticipated that measuring tapes will be the primary method used to relocate the x-y grid coordinates of interpreted targets. Anomaly coordinates will be provided to the intrusive teams who will place numbered surveyor's pin flags at the anomaly location. Where it is appropriate, other methods such as USRADS, Robotic Total Station, Constellation, Vulcan or other surveying methods may be used.

6.13.5 An excavation team will excavate each flagged location. The excavation information will be digitally logged on a field data collector and transferred to the site database.

6.13.6 Should intrusive results diverge significantly from interpretation data, a Root Cause Analysis shall be implemented to identify the processes that require refinement. Geophysical investigation components will be evaluated including data acquisition (coverage, density, quality, noise levels, positioning), data processing (merging of electromagnetic data and position data, filtering if necessary, background shifts), and data interpretation (anomaly analysis, computer calculations for locations, sizes, and depths). The procedures for target reacquisition will also be evaluated. Corrective measures will be implemented, as necessary, to ensure that subsequent interpretive data and/or reacquisition procedures are modified to more accurately reflect ground-truth results.

6.13.7 As part of the existing QC of geophysical data, the database manager assigned to this task order will change 10% of the anomalies selected as "no dig" by the geophysicist to "dig." This will provide a second level of quality control to ensure that the priority and level of selection were correct for this area. Neither the intrusive team nor geophysicist has knowledge of this process until after intrusive activities have finished in a given grid.

1   **7.0       LOCATION SURVEY AND MAPPING PLAN**

2   7.0.1       A Location and Survey and Mapping Plan was prepared in accordance with USAESCH  
3   DID OE-005-7, Location Survey and Mapping Plan. See Section 7.0 – Location Survey and  
4   Mapping Plan in the SWWP.

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1    **8.0        PROJECT AND COST MANAGEMENT PLAN**

2    8.0.1      This section is not required for this work plan.

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1    **9.0      PROPERTY MANAGEMENT PLAN**

2    **9.1      GENERAL**

3    9.1.1      A Property Management Plan was prepared in accordance with USAESCH DID OE-  
4    005-9, Property Management Plan. See Section 9 - Property Management Plan in the SWWP.

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1    **10.0    ENVIRONMENTAL PROTECTION PLAN**

2    10.0.1    This section is not required for this work plan.

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## **11.0 QUALITY CONTROL PLAN**

### **11.1 GENERAL**

11.1.1 This Quality Control Plan has been prepared in accordance with the SOW and contract specifications for work being completed under this task order (Chapter 2). All QC documentation will be submitted as part of or as supporting documentation for the final report. All QC records and documentation will be kept on site and made available for government inspection upon request.

### **11.2 DUTIES AND RESPONSIBILITIES**

11.2.1 UXO Quality Control Specialist. The UXO Quality Control Specialist is responsible for:

- Conducting audit and surveillance activity;
- Completing forms and other documentation;
- Conducting preparatory, initial, and follow-up inspections; and
- Maintaining log of activities.

### **11.3 QUALITY CONTROL**

11.3.1 Quality Control is conducted using a three-phase control process; preparatory, initial, and follow-up inspection to ensure processes are in control and opportunities for improving processes are captured and implemented. Personnel conducting Quality Control have stop-work authority and are organizationally independent from the processes.

#### **11.3.1 Preparatory Phase**

11.3.1.1 A preparatory phase inspection will be performed prior to beginning each definable feature of work. The purpose of this inspection will be to review applicable specifications and verify that the necessary resources, conditions, and controls are in place and compliant before the start of work activities. The personnel responsible for the work activity are responsible for ensuring that:

- Appropriate plans and procedures are developed and approved;
- Personnel required for the activity are identified and positions filled;
- Training requirements are identified and training complete;
- Preliminary work and coordination has been completed; and
- Equipment and materials required to perform the work has been identified and is available.

1 11.3.1.2 The following QC actions are performed by the QC Staff for each preparatory phase  
2 inspection:

- 3
- 4 • Verify that appropriate plans and procedures are developed, approved and are
- 5 available;
- 6 • Verify personnel identified are available and meet the requirements/qualifications for
- 7 the position or waivers obtained from the client;
- 8 • Verify that the required training has been performed
- 9 • Verify identified equipment is available, functional, and appropriate for the job;
- 10 • Verify that the preliminary work and coordination have been accomplished
- 11 • Verify that level of quality expected is understood;
- 12 • Verify Work Plan and applicable Standard Operating Procedures (SOP) have been
- 13 reviewed and understood by the workers; and
- 14 • Brief process improvement program.
- 15

16 11.3.1.3 The specific QC activities performed during the preparatory phase, and results of those  
17 activities, will be documented on the QC Surveillance Report, which will be attached to the  
18 Daily Quality Control Report.

19

20 11.3.1.4 Discrepancies between existing conditions and approved plans/procedures will be  
21 resolved and corrective actions taken for unsatisfactory and nonconforming conditions identified  
22 during a preparatory phase inspection.

23

24 11.3.1.5 The UXOSO will discuss job hazards with site personnel and verify that the necessary  
25 safety measures are in place and ready for use.

26

27 11.3.1.6 The UXOSO will ensure all personnel are familiar with the data collection requirements  
28 of each phase of field work. Data will be collected and verified by QC surveillance during the  
29 preparatory phase.

## 30 **11.3.2 Initial Phase Inspection**

31 11.3.2.1 An initial phase inspection will be performed the first time a definable feature of work  
32 is performed. The purpose of the inspection will be to check the preliminary work for  
33 compliance with procedures and contract specifications. Another aim is to establish the  
34 acceptable level of workmanship, check safety compliance, review the preparatory phase  
35 inspection, and check for omissions and resolve differences of interpretation.



11.3.2.2 The following will be performed for each definable feature of work:

- Deficiencies identified during the preparatory phase have been corrected;
- Requirements of quality of workmanship will be established;
- Completion of readiness review actions verified;
- Differences of interpretation will be resolved;
- Work Plan and applicable documents reviewed to ensure that the requirements are being met; and
- Performance of work will be observed and adequacy of work verified.

11.3.2.3 Discrepancies between site practices and approved plans/procedures will be resolved. The Site QC Manager or his designee, prior to granting approval to proceed will verify corrective actions for unsatisfactory conditions or practices.

11.3.2.4 The specific QC activities performed during the initial phase, and results of those activities, will be documented on a QC Surveillance Report and attached to the Daily Quality Control Report.

### **11.3.3 Follow-up Phase Inspection (Surveillance)**

11.3.3.1 The follow-up phase inspection is performed on a scheduled and unscheduled basis. The purpose of the inspection is to ensure a level of continuous compliance and workmanship. The Site QC Manager is responsible for on-site monitoring of the practices and operations taking place and verification of continued compliance with the specifications and requirements of the statement of work and approved SOPs. The following will be performed for each definable feature of work:

- Inspections/surveillance to ensure that the work is in compliance with the statement of work and work plans;
- Inspections/surveillance to ensure the required level of workmanship is maintained;
- Inspections/surveillance to ensure each project log book is properly filled out and maintained; and
- Inspections/surveillance to ensure data management system is properly tracked and backed up.

11.3.3.2 Follow-up results either negative or positive will be documented on a Surveillance Report and attached to the Daily Quality Control Report.

### **11.3.4 Acceptance Inspection**

11.3.4.1 After work is complete, an acceptance inspection will be conducted. The sampling plans/procedures will be a MILSTD 1916 type acceptance inspection. The six grids will be consolidated into one lot which contains 120 lanes. Using Verification Level (III) Code Letter (A) we will sample 32 of the 120 lanes within this lot. The acceptance criteria is, "Any item below a depth of one foot that meets the specified target item size of between a 37mm and 3" Stokes Mortar."

11.3.4.2 All conditions observed during the acceptance inspection will be documented. Conditions that are identified as questionable will be evaluated by project management and the UXOQC to determine the acceptability. When a withhold condition is identified a deficiency or nonconformance report will be issued and a root cause analysis completed. If corrective action must be taken to correct the condition prior to acceptance the work will be coordinated with USACE.

11.3.4.2 All data collected will be verified for correctness by the UXOQC. This will include logbooks, daily reports, and intrusive data. Geophysical data will be verified by a qualified geophysicist.

### **11.3.5 Deficiencies and Nonconformance**

11.3.5.1 All deficiencies or nonconforming conditions discovered during inspection or other QC functions will be noted on either a Deficiency or Nonconformance Report (NCR) as appropriate. All deficiencies and nonconformance conditions will be resolved prior to completion of the project. The Daily QC Report will include a report on each Deficiency/NCR that was completed and closed out for the day.

11.3.5.2 It is the responsibility of all personnel on the project to identify deficiencies and nonconforming conditions to their supervisor or manager as soon as they are identified. Deficiencies and nonconforming conditions should be considered opportunities to improve the process.

### **11.3.6 Root Cause Analysis**

11.3.6.1 Both the deficiency and nonconformance report forms contain an area for the entry of information regarding the cause of the problem and proposed resolution. The determination of the root cause of a deficiency or nonconformance is an integral part of the QC process. The depth and extent of the root cause analysis depends on the situation. It may be as simple (minor) as an overlooked step or procedure or be a complicated process. Root cause analysis is the responsibility of the functional manager or his/her designee with the assistance of Quality Control Representatives. Criteria considered in the analysis will include:

- Staff qualifications and training;
- Adequacy of procedures;
- Adequacy of equipment; and
- Adequacy of QC measures.

11.3.6.2 Input will be obtained as necessary from field personnel and technical advisors in order to identify the factors, which led to the problem. The root cause is always “upstream” from where the problem was detected. Two strategies that will be employed for determining the root cause of a deficiency or NCR for this project are: 1) tracing the problem back to the source, and 2) evaluation of the cause using basic questions such as who, what, when, where, why, and how. ‘Why?’ is probably the most beneficial question when attempting to arrive at a root cause. This question may need to be asked multiple times before the cause is identified. For example, “Why

1 did A happen?” Answer: “Because of B,” “Why did B happen?” Answer: “Because of C.” This  
2 process is carried on until the real cause is identified.

### 3 **11.3.7 Corrective Action**

4 11.3.7.1 Following the root cause analysis, the UXOQC will perform analysis of potential  
5 solutions (corrective actions) to determine which remedy is most effective in correcting the  
6 problem. The process will include all appropriate personnel and will be documented via meeting  
7 notes and information listed in the proper sections on the deficiency report or NCR report.  
8 Potential remedies considered may include:  
9

- 10 • Supplemental personnel training;
- 11 • Changes of equipment or modification of equipment currently in use;
- 12 • Acquisition of supplemental equipment;
- 13 • Implementation of new procedures or modification of existing procedures; and
- 14 • Changes in QC procedures.

15  
16 11.3.7.2 The decision for appropriate corrective action to implement is the responsibility of the  
17 PM, however, all parties involved prior to implementation should agree upon this decision.  
18

19 11.3.7.3 Successful implementation of corrective action will be documented on the deficiency  
20 or nonconformance report. The project QC representative will verify through a follow-up phase  
21 surveillance that the corrective action implemented has corrected the deficiency or  
22 nonconforming condition and is sufficient to prevent recurrence.

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## **12.0 INVESTIGATIVE DERIVED WASTE PLAN**

12.0.1 This section is not required for this work plan.

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## **13.0 GEOGRAPHICAL INFORMATION SYSTEMS (GIS) PLAN**

13.0.1 This section is not required for this work plan.

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## **14.0 INTERIM HOLDING FACILITY SITING PLAN FOR RECOVERED CHEMICAL WARFARE MATERIAL (RCWM) PROJECTS**

14.0.1 This section is not required for this work plan.

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## **15.0 PHYSICAL SECURITY PLAN FOR RCWM PROJECT SITES**

15.0.1 This section is not required for this work plan.

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## **16.0 REFERENCES**

16.0.1 The following references were used in the writing of this WP:

- DoD 4160.21M Defense Material Disposition Manual
- TtFWI Site Wide Work Plan
- Appendix A, Corps of Engineers Contractors Ordnance and Explosive (OE) Range Residue (RR) Inspection, Certification, and Final Disposition Procedures dated 10 April 2003

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## **APPENDIX A**

### **Statement of Work**

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**SCOPE OF WORK  
FOR  
INITIAL ACTUAL TASK ORDER**

**SITE CHARACTERIZATION  
AT  
FORT McCLELLAN, ALABAMA**

**U.S. ARMY ENGINEERING AND SUPPORT CENTER,  
HUNTSVILLE**

**STATEMENT OF WORK**

**Modification # 1516**

**SITE CHARACTERIZATION**

**AT**

**FORT McCLELLAN, ALABAMA**

**~~February 11~~ October 25, 2004**

1.0 **Objective.** The objective of this task order is for the Contractor to characterize ranges possibly contaminated with Ordnance and Explosives (OE) at Fort McClellan, Alabama.

2.0 **BACKGROUND.** Fort McClellan is a U.S. Army facility under the control of the U.S. Army Training and Doctrine Command (TRADOC) and is scheduled to be closed under the Base Realignment and Closure (BRAC) program. Ordnance and Explosives (OE), including Chemical Warfare Materiel (CWM) are suspected to exist on this property.

2.1 **General.** The work required under this Scope of Work (SOW) falls under the BRAC program.

2.1.1 Ordnance and Explosives are a safety hazard and, if present, constitute a hazard to the public and the environment. The Contractor will perform this work in a manner consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the National Contingency Plan (NCP). For any actions on site, administrative requirements of federal, state, or local permits are not required, but the substantive permit requirements shall be fulfilled. The provisions of 29 CFR 1910.120 apply to all actions taken at this site.

2.2 **SITE DESCRIPTION.**

2.2.1 **Location.** Fort McClellan is located northeast of the City of Anniston, Calhoun County, Alabama. To the west are the areas known as Weaver and Blue Mountain. To the North is the City of Jacksonville. The Talladega Forest is to the east of the post.

2.2.2 Site History. Fort McClellan has been used for artillery training of troops and the National Guard as early as 1912 to present day. In 1941, McClellan became site of the Chemical Corps Training Command. In 1962, the U.S. Army Combat Developments Command Chemical Biological-Radiological Agency moved to Fort McClellan. In 1973, the Chemical Corps School along with the U.S. Army Combat Developments Command Chemical Biological-Radiological Agency closed. In 1979, the U.S. Army Chemical Corps School re-established along with a Training Brigade for Basic Training.

2.3 Area of Concern. The contractor shall characterize the following areas identified in the Conceptual Plan dated August 2000: a) Alpha Area: This area consists of approximately 942 acres within which are three areas, M1.01, M5, and M6, identified in the Archives Search Report (ASR) as potentially contaminated with OE.

b) Bravo Area: This area consists of approximately 3,806 acres within two parcels, M3 and M4, identified in the ASR as potentially contaminated with OE.

### 3.0 TASKS.

3.1 (TASK 1-Firm Fixed Price) SITE VISIT. The purpose of this task is to permit those members of the Contractor with direct project responsibility to gain necessary information about site conditions. A site visit is authorized to assist in preparing the work plan. The site visit team shall include one (1) Senior UXO Supervisor. The Contractor will coordinate the site visit with the Contracting Officer (CO) 10 days prior to arriving on site. The Contractor will prepare an abbreviated SSHP and submit it to the CO for review and approval prior to the visit. The Contractor shall ensure that the site visit is fully coordinated and that all members of the site visit team maintain compliance with the abbreviated SSHP.

3.2 (TASK 2-Firm Fixed Price) Work Plan. The contractor shall prepare and submit a Site-Wide Work Plan that will provide the basis for performance of all following projects performed on Fort McClellan. The Site-Wide Work Plan shall incorporate all of the

requirements contained in Data Item Descriptions within the general statement of work for the basic contract, and will reflect requirements as of October 1999. In addition, the contractor shall prepare and submit a site-specific work plan for each of the two areas under this project in accordance with DID OT-FMC-005-01 and this Task Order. The site specific work plan shall include all site specific details as required by OE-005-1 that are not covered by the site-wide work plan for Fort McClellan. The work plan shall propose site locations and the anticipated work that shall be conducted. The work plan shall include all necessary sub-plans in accordance with DID OT-FMC-005-01 and each required sub-plan's corresponding DID. The work conducted under this work plan shall also be performed in accordance with the technical requirements as outlined in each DID. Specific requirements determined by the contractor as not applicable shall be clearly identified by the contractor in his work plan. The work plans shall include a conceptual site model for each of the areas to be characterized with the exception of the M1.01 Parcel. The contractor shall prepare a work plan addendum to the Final Site-Specific Work Plan for the Bravo Area EE/CA. The contractor shall prepare a work plan addendum to address the additional work to be performed under this modification.

3.3 (TASK 3, OPTION 1-Firm Fixed Price) Phase I Site Characterization. The purpose of site characterization shall be to delineate the magnitude and extent of OE contamination for the areas identified in paragraph 2.3. The characterization shall produce sufficient information for the contractor to identify target anomalies, prepare risk assessments, evaluate alternatives for remediation, prepare cost analyses for each alternative, and recommend remediation alternatives. The contractor shall perform the first phase of site characterization for the area of concern as identified in this task order. The Phase I site characterization shall exclude removal of subsurface anomalies, except as delineated in the site-specific work plans. Typical activities that may be performed during the Phase I site characterization may include but are not limited to: historical

data analysis, footprint reduction methodologies, field reconnaissance, assisted visual transects, and detection of OE. The performance of these activities may require surveying and mapping, brush clearing (including areas surrounding the grids), and/or removal and disposal or staging of surface OE or debris. The contractor shall perform delineation transects in suspected high-density areas within the Alpha EE/CA area and within the M3-1L sector of the Bravo EE/CA area. For characterization of the M1.01 Parcel, the contractor shall utilize data gathered by other contractors under work being performed for the Eastern Bypass. For characterization of all areas, the contractor shall also use the historical data analysis and field reconnaissance information gathered under a separate task order and reported in the Field Reconnaissance and Conceptual Plan dated August 2000. The contractor shall provide security for the suspect chemical warfare materiel that was found during the surface clearance, assist in determining procedures and regulatory requirements for demolition, perform demolition of the item, perform soil sampling, prepare a report on the demolition, and shall relocate work areas outside of exclusions zones surrounding any suspect CWM. The contractor shall perform characterization of approximately 11.8 miles of 5-foot wide transects. This characterization shall utilize a hand-held geophysical instrument with no brush clearing. A hand-held GPS unit may be used to record locations if coverage is available. Characterization shall include investigation of 100% of anomalies up to 40 per 290'; 50% of additional anomalies from 41 to 100 anomalies per 290'; and 30% of anomalies >100 per 290' (estimate anomaly investigation on a fixed unit cost basis). If upon investigation a UXO is identified, a 50' grid will be investigated surrounding the UXO (estimate on a fixed unit cost basis; assume 2 for initial cost estimating purposes). If a piece of HE fragmentation is discovered on a transect, a 50' star pattern transect, 25' lines 5 foot wide from the item found, will be investigated in 8 directions from the piece of fragmentation (estimate on a fixed unit cost basis; assume 10 for initial cost estimating purposes). All anomalies in the grid and star pattern

transects will be investigated. If additional frag or UXO are found, the grid or star pattern transect will be repeated from that point. The process would continue until no frag or UXO is found. The contractor shall investigate six grids in the M1.01 area to evaluate the appropriateness of the one-foot clearance by determining if any ordnance items with an explosive hazard are located below one foot in those grids. The investigation shall include geophysical mapping and investigation of anomalies. The six grids as identified in the M1.01 removal report are: D-05, D-41, E-29, G-20, G-24, and G-64. QC of these grids will be performed using MIL STD 1916. **The QC failure criteria for this area shall be any item below a depth of 1 foot that meets the specified target item size of between a 37 mm and a 3" Stokes mortar.**

3.4 (TASK 4-Time and Materials) Data Analysis and Validation. The contractor shall perform data validation for a subset of the subsurface anomalies identified during the Phase I site characterization. The contractor shall clearly identify his methodology. The contractor shall interrogate and excavate anomalies to validate his process. The description of terrain and vegetation and the assumptions regarding anomaly density given in Task 5 are applicable to this task. Typical activities that may be performed during data analysis and validation may include, but are not limited to: post-processing of geophysical data, reacquisition of selected anomalies, and excavating, identifying, and disposal of the selected anomalies. The contractor shall fabricate and mobilize two "Bud Lite" engineering control structures for use during the intrusive phase of the investigation, if required to minimize exclusion zones. The contractor may also be required to demobilize and relocate work areas outside of exclusions zones surrounding any suspect CWM.

3.5 (TASK 5, OPTION 2 -Time and Materials) Phase II Site Characterization. The contractor shall reacquire, excavate, identify, and dispose of a portion of the anomalies in grid areas not intrusively investigated in Tasks 3 or 4. The contractor shall assume that Phase II Site Characterization shall consist of

statistical sampling and analysis of 296.5 acres. For purposes of preparing a cost estimate the contractor shall assume:

- 142 acres are heavily wooded,
- 77 acres are moderately wooded
- 18 acres are open and 59.5 are lightly wooded,
- 125 acres are steeply sloped terrain,
- 111.5 acres are moderately sloped hilly terrain,
- 60 acres are flat terrain,
- All subsurface anomalies to be removed were identified during the discrimination portion of the Data Validation task.
- Each acre will require removal of 100 anomalies,
- Depth of anomalies will be from 0.0 feet to 4.0 feet, uniform distribution.
- ***Objective range for target anomalies will be determined on a site-specific basis through data validation.***
- Five UXO per acre will be removed and disposed of,
- All recovered scrap shall be removed and disposed of in accordance with the basic contract.

The characterization from both phases shall produce sufficient information for the contractor to identify target anomalies, prepare risk assessments, evaluate alternatives for remediation, prepare cost analyses for each alternative, and recommend remediation alternatives.

3.6 (TASK 6-Firm Fixed Price) Data Management. The contractor shall manage all data in accordance with DID OT-FMC-005-14. This shall include incorporation of all reports, drawings, or data generated during this Task Order as well as mirroring all changes onto the Fort McClellan database located at USAESCH.

3.7 (Task 7-Firm Fixed Price) PREPARE EE/CA REPORT.

3.7.1 The Contractor shall prepare and submit three EE/CA reports in accordance with DID OE-010. The reports shall contain the Contractor's conclusions as to the nature and extent of OE contamination, risk assessments for each area of concern, and provide recommendations for future work at Fort McClellan within

these areas. The area of concern should be sufficiently characterized in the EE/CA. The textual portions of the report shall be fully supported with accompanying maps, charts, and tables as necessary to fully describe and document all work performed and all conclusions and recommendations presented. The M1.01 Parcel findings shall be contained in a stand-alone EE/CA document. The remaining Alpha Area and the Bravo Area shall comprise the other two EE/CAs. Information gathered by another contractor during the CWM EE/CA on the T-38 site and the R&S smoke ranges shall be incorporated into the Alpha area EE/CA and on the Old Burn Pit into the Bravo area EE/CA. The contractor shall evaluate information on ordnance found during actions taken by other contractors within the Alpha and Bravo areas and incorporate this information in the Bravo EE/CA report. The contractor will incorporate the new information into the Alpha EE/CA report, if the information impacts the recommended decisions already made in the Alpha EE/CA. The Contractor shall incorporate the additional sampling performed under the Phase II characterization into the EE/CA report for Alpha Area. The contractor shall incorporate the additional sampling performed under Phase II characterization into the Bravo EE/CA Report and produce an additional Internal Draft version of the Report. In addition, the contractor shall revise the risk assessment and EE/CA Report to redefine the risk sectors based on comments received from the government and produce an additional Draft version of the Bravo EE/CA. The Contractor shall provide an additional version of the Final Alpha EE/CA report to incorporate comments from ADEM and other reviewers. The Contractor shall also provide slippage changes to the Draft-Final Bravo EE/CA report necessary to make the Bravo EE/CA consistent with the Alpha EE/CA. The contractor shall provide revised cost estimates for all alternatives in the EE/CA Report. The contractor shall incorporate the data collected from the additional transects in the Bravo area and the revised Bravo area boundaries into a revised Bravo EE/CA. The contractor shall prepare a letter report as an addendum to the M1.01 Final Site-Specific Report documenting all work performed and the results of



the investigation. The contractor shall report findings in accordance with DID OE 030.01.

3.7.2 Evaluate Institutional Controls. The EE/CA reports shall fully evaluate physical removal and institutional controls as possible action alternatives. Basic data for the institutional analysis will be collected in accordance with DID OE-100

3.8 (TASK 8-Firm Fixed Price) PREPARE ACTION MEMORANDUM. The EE/CAs will be provided to the public for their review and comments. The Contractor shall evaluate any public comments provided by the Contracting Officer and shall incorporate them where directed by the Contracting Officer. Afterwards, the Contractor shall prepare an Action Memorandum for each of the three EE/CAs describing the selected alternative.

3.9 (TASK 9-Firm Fixed Price) MEETINGS/PUBLIC AFFAIRS. The Contractor shall attend and participate in nine meetings with DoD, regulatory, and civilian agencies as directed by the CO. The meetings shall last one day each and be held at Fort McClellan, AL. The Contractor shall assist USAESCH Public Affairs Office (PAO) and the Corps of Engineers, Mobile District PAO in developing and executing a Public Affairs program to include public meetings and Restoration Advisory Board (RAB) meetings.

3.10 (Task 10) - Fixed Price) Delivery Order Administration. The Contractor shall provide all labor, facilities, equipment and materials to administer the Hazardous Pay Differential provisions of the Service Contract Act for all employees working under this Delivery Order.

#### 4.0 SCHEDULE OF DELIVERABLES

4.1 Deliverables. The Contractor shall provide the indicated deliverables on the following schedule:

<b>Deliverables</b>	<b>Days after NTP</b>
Internal Draft M1.01 EE/CA	15 days after NTP
Draft M1.01 EE/CA	25 days after NTP
Draft Final M1.01 EE/CA	5 days after comments received
Draft M1.01 Action Memorandum	5 days after DF EE/CA received

Final M1.01 EE/CA	3 days after public meeting
Final M1.01 Action Memorandum	5 days after comments received
ASSHP	10 days prior
Draft Work Plan Alpha Area	20 days after award
Draft Work Plan Bravo Area	34 days after NTP
Final Work Plan Alpha Area, Bravo Area	5 days after comments received
Draft Bravo EE/CA Work Plan Addendum	10 days after NTP
<del>Draft-Final</del> Bravo EE/CA Work Plan Addendum	10 days after receipt of comments
Final Bravo EE/CA Work Plan Addendum	10 days after receipt of comments
<u>M1.01 Work Plan Addendum</u>	<u>10 days after NTP</u>
Internal Draft EE/CA Report Alpha Area, Bravo Area	15 days after receipt of CWM EE/CA data
Revised Internal Draft Bravo EE/CA Report	30 days after completion of fieldwork
Draft EE/CA Report Alpha Area, Bravo Area	35 days after field work completed
Revised Draft Bravo Area EE/CA Report	10 days after draft comments received
Draft-Final EE/CA Report Alpha Area, Bravo Area	10 days after draft comments received
Revised Draft Bravo Area EE/CA Report	30 days after completion of fieldwork
Revised Draft-Final Bravo Area EE/CA Report	10 days after comments received
Final EE/CA Report Alpha Area, Bravo Area	1 day after public comments received
Revised Final Alpha EE/CA Report	10 days after receipt of comments
<u>M1.01 Letter Report</u>	<u>15 days after completion of field work</u>
Action Memorandum-Draft Alpha Area, Bravo Area	10 days after F EECA received
Action Memorandum-Final Alpha Area, Bravo Area	10 days after draft comments received

Status Reports and Telephone/Conversation Reports are due monthly. The original of each of these reports shall be sent within 10 days of the end of the reporting period by normal mail to the project manager.

4.2 Addresses and Distribution The Contractor shall furnish copies of the plans and reports as indicated to each addressee listed below in the quantities indicated. The following addresses

shall be used in mailing submittals:

ADDRESSEE	Draft Submittals	Draft-Final & Final Submittals
Commander US Army Engineering and Support Center, Huntsville ATTN: CEHNC-OE-DC (Mr. Dan Copeland) 4820 University Square Huntsville, Alabama 35816-1822	6	6
Commander US Army Engineering and Support Center, Huntsville ATTN: CEHNC-CT-E (Ms. Evelyn Kelley) 4820 University Square Huntsville, Alabama 35816-1822	1	1
Commander US Army Engineer District, Mobile ATTN: CESAM (Mr. Ellis Pope) P.O. Box 2288 Mobile, AL 36628-0001	3	3
Commander US Army Engineer Division, South Atlantic ATTN: CESAD-PM-H (Ms. S. Ernst) 77 Forsyth St., SW Atlanta, GA 30335-6801	NA	1
ATTN: Mr. Doyle Brittain U.S. Environmental Protection Agency 61 Forsyth St, SW Atlanta, GA 30303-3104	3	3
Alabama Department of Environmental Management Government Facilities Section, Haz Waste Branch, Land Division ATTN: Mr. Phillip Stroud P.O. Box 301463 Montgomery, AL 36130-1463	3	3
U.S. Army Garrison ATTN: ATZN-ENV, Lisa Kingsbury 291 Jimmy Parks Blvd. Fort McClellan, AL 36205-5000	9	15

## 5.0 SUBMITTALS and CORRESPONDENCE

5.1 Format and Content of Reports. All drawings shall be of engineering quality with sufficient details. The report shall consist of 8 1/2" X 11" sheets of paper. The report covers shall consist of durable binders and shall hold pages firmly while allowing easy removal, addition, or replacement of pages. A title shall identify the site, the Contractor, the Huntsville Center, and date. The Contractor's identification shall not dominate the title page.

5.2 Review Comments. The Contractor shall review all comments received from the Contracting Officer or the Contracting Officer's Representative and evaluate their appropriateness based upon their merit. The Contractor shall incorporate all applicable comments and provide a written response to each comment no later than 21 days after the Contractor receives the comment.

5.3 Identification of Responsible Personnel. Each submittal shall identify the specific members and title of the subcontractor and Contractor's staff that had significant input into the report.

5.4 Presentations. The Contractor shall make presentations of work performed and as directed by the CO. The presentation shall consist of a summary of the work accomplished and will be followed by an open discussion.

5.5 Minutes of Meetings. The Contractor shall prepare and submit minutes of all meetings and/or presentations within 10 working days to the CO.

5.6 Correspondence. The Contractor shall keep a record of phone conversations and written correspondence affecting decisions relating to the performance of this task order. A summary of the phone conversations and copies of written correspondence shall be submitted to the CO with the monthly progress report.

5.7 Monthly Progress Report. The Contractor shall prepare and submit monthly progress reports in accordance with DID OT-FMC-080.

5.8 Digital Data. All final text files generated by the Contractor under this task order shall be furnished to the CO in Word 97, IBM PC-compatible format. All drawings shall be on reproducible (mylar) and digitized 3D design file in Intergraph

Corporation format, compatible with USAESCH Graphics system. All field generated digital data shall be transmitted to the USAESCH technical representative on a weekly basis. The results of the excavations will include all pertinent features of the anomaly, to include items such as: type, condition, actual location, depth, size, mass, and any other information that would significantly assist in classifying the anomaly. The location in State Grid Plane Coordinates, the instrument response, anomaly code(s), and important information shall be provided in an Excel spreadsheet and data base listing, as a minimum; northing, easting, relative signal strength, measured signal strength, and any unusual or noteworthy attributes to facilitate excavation tracking. A standard structure and format shall be used to digitally track the results from the anomaly excavations.

6.0 **GOVERNMENT FURNISHED INFORMATION.** The government will provide the following information to the contractor for:

- Draft Archive Search Report for Fort McClellan, 1998
- Planimetric mapping and contour files for Fort McClellan
- Historical Photographic coverage for area identified in paragraph 2.3.

Upon award of the contract the government will also provide historical photo interpretation for the area identified in paragraph 2.3.

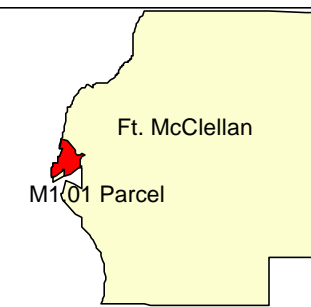
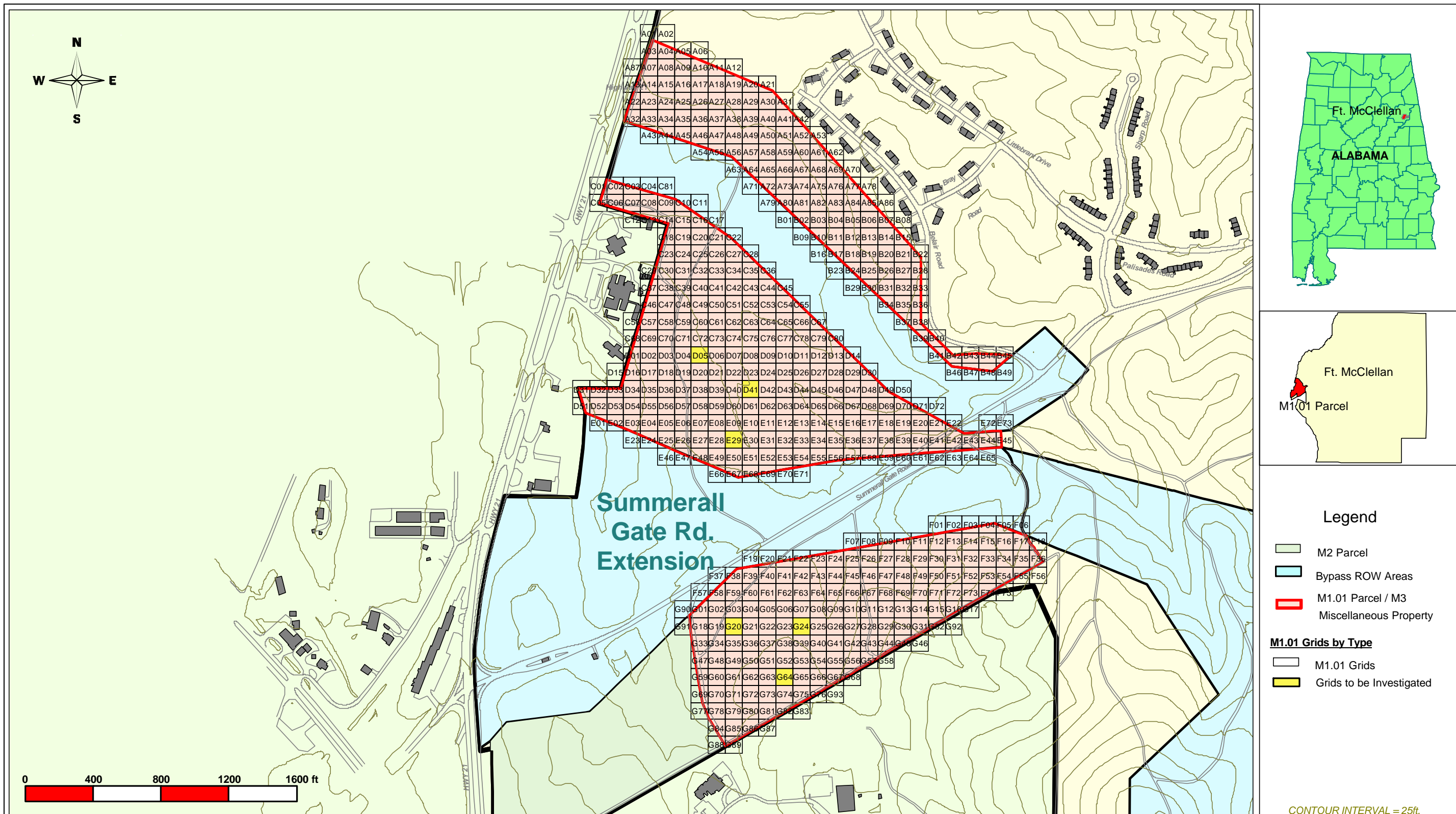
7.0 **PERFORMANCE METRICS.** The performance and subsequently the evaluation of the contractor on this task order shall be based on certain performance metrics. At the completion of the Task Order a board consisting of at least two government personnel and one representative of the contractor will perform the contractor evaluation for approval by the CO or his designated representative. The contractor representative will be selected by the CO. Appraisals will be issued to support exercising subsequent option periods using AFARS 42.15 and ER 715-1-19.

7.1 Safety.

## **APPENDIX B**

### **Site Map**

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FM: WWM Fort McClellan, Alabama

U.S. Army Engineering and Support Center  
Huntsville, Alabama  
Contract DACA 87-99-D-0010 Delivery Order 0015

FIGURE B-1  
M1.01 Parcel Site Map  
M1.01 Parcel Explosives Safety Submission



**INSERT FIGURE HERE**

## **APPENDIX C**

### **Local Points of Contacts**

**Please see section 6.12.4 of the SWWP**

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## **APPENDIX D**

### **Site Safety And Health Plan**

**Work for this investigation is being carried out using the site wide safety and health plan which is section 6 of the SWWP**

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## **APPENDIX E**

### **Environmental Sampling and Analysis Plan**

**This appendix is not required in this work plan**

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## **APPENDIX F**

### **Contractor Forms for Collecting and Recording Data**

**Please see the SWWP for these forms**



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## **APPENDIX G**

### **MSD Calculation Sheets**

**There is no MPM, therefore there is no MSD for this investigation.**

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## **APPENDIX H**

### **Resumes**

**No resumes are included with this work plan**

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